SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

2008
RTP REGIONAL TRANSPORTATION PLAN

Making the Connections

Congestion Management Strategy Report

DRAFT

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CONGESTION MANAGEMENT

Background

The United States Safe, Accountable, Flexible, Efficient Transportation Equity Act, a Legacy for Users (SAFETEA-LU) requires the development, establishment and implementation of a Congestion Management Process which is fully integrated into the regional planning process.

The Federal Highways Administration defines the congestion management process as a "systematic approach required in transportation management areas (TMAs) that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C., and title 49 U.S.C., through the use of operational management strategies."

SCAG's Congestion Management Process is a comprehensive strategy designed to relieve traffic congestion and maintain high levels of service on roadways within the Southern California region. SCAG has facilitated efforts by counties and sub-regions to develop County-level Congestion Management Plans (CMPs) in consultation with regional and sub-regional transportation providers, local governments, Caltrans, and the South Coast Air Quality Management District.

In the SCAG region, the Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties are contained within the Transportation Management Areas (TMAs). The Federal Highway Administration (FHWA) defines TMA as the following:

Transportation management area (TMA)[1]:

1. All urbanized areas over 200,000 in population, and any other area that requests such designation.
2. An urbanized area with a population over 200,000 (as determined by the latest decennial census) or other area when TMA designation is requested by the Governor and the MPO (or affect local officials), and officially designated by the Administrators of the FHWA and the FTA. The TMA designation applies to the entire metropolitan planning area(s). (23CFR500)

The County Transportation Commission in each county also functions as a Congestion Management Agency (CMA) under California regulations.

To meet the federal Congestion Management Process requirements, SCAG and the county CMAs have come together to develop a Congestion Management Process for the region. Under California law, the Congestion Management Programs (CMPs) are prepared and maintained by the respective CMAs:

- The Los Angeles County Metropolitan Transportation Authority (LACMTA)
- The Orange County Transportation Authority (OCTA)
- The Riverside County Transportation Commission (RCTC)
- The San Bernardino Associated Governments (SANBAG)
- The Ventura County Transportation Commission (VCTC)

With the exception of small portions of Riverside and San Bernardino counties, all counties within the TMA are designated as ozone non-attainment areas. In addition, the entire South Coast Air Basin (SCAB) is designated as a carbon monoxide non-attainment area. SCAB covers the urbanized portions of Los Angeles, Orange, Riverside, and San Bernardino counties.

Federal funds may not be programmed in the carbon monoxide and ozone non-attainment areas of the Transportation Management Areas (TMAs) for any project that will result in a significant increase in single occupant vehicle (SOV) capacity unless that project is addressed through a CMS. In the SCAG region, the federally approved and conforming RTP functions as the associated CMS.

The CMPs interlink with the Air Quality Management Plan (AQMP) in several areas, but most significantly through the Transportation Control Measures

[1] http://www.fhwa.dot.gov/planning/glossary/glossary_listing.cfm

(TCMs). Most TCM projects identified in the RTIP are designed to help relieve congestion at the local level. Thus, implementation of the AQMP helps local governments tackle congestion, which, in turn, reduces emissions from idling vehicles or the number of vehicles traveling on congested roadways, and also helps maintain the level of service standards. At the same time, the CMP process provides local governments a mechanism to contribute to the regional effort toward attaining the NAAQS.

Regional Congestion Management Elements

In compliance with the sections of the Metropolitan Planning Regulations [23 U.S.C. 134 and 49 U.S.C. 5303 - 5305], SCAG's CMS process is comprised of the following Regional Congestion Management Elements:

- The Regional Transportation Plan (RTP)
- The counties' Congestion Management Programs (CMPs)
- The Regional Transportation Improvement Program (RTIP)

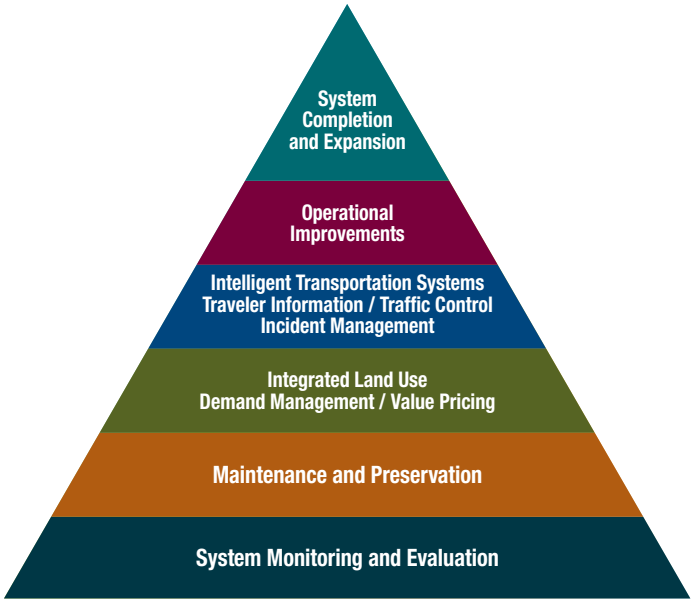
The functionality of each element is described in the following sections.

REGIONAL TRANSPORTATION PLAN (RTP)

SCAG's RTP establishes overall long term mobility policies for the movement of people and goods, including congestion relief strategies for all regionally significant facilities and activities (projects and programs). The RTP is guided by a Transportation System Management Philosophy.

As Figure 1 shows, system expansion (depicted by the top of the triangle) is no longer the primary transportation strategy that may be used to provide improved mobility. We must preserve our aging infrastructure, optimize the efficiency of the current multimodal system, and strategically expand it to maximize the return on our scarce investments.

FIGURE 1 SYSTEM MANAGEMENT PHILOSOPHY



SYSTEM MONITORING AND EVALUATION

Federal regulations require establishment of a traffic monitoring system (TMS). It is the responsibility of the State, the California Department of Transportation (Caltrans) - working with the metropolitan planning organizations (MPOs), and local agencies - to develop a TMS.

In 2002, SCAG developed the initial component of a Regional Transportation Monitoring Information System (RTMIS). The initial component includes the continuous downloading of the Performance Measurement System (PeMS) data and access to Highway Performance monitoring System (HPMS) data in the region. While the PeMS data is limited to freeways, the HPMS data encompasses all federal-aid systems; including freeway system and selected arterials. The HPMS program is a joint effort of the Federal, State, MPO, and local governmental agencies.

SCAG coordinates submittal of the HPMS data update with the local jurisdictions. Annually, through the HPMS program, SCAG submits over five thousand sheets for updating data to cities and counties in Southern California. After reviewing the updated sheets for accuracy and completion, SCAG submits them to Caltrans. In compliance with the federal regulations, Caltrans uses the new information to update its HPMS Annual Report. Every year, the Federal Highway Administration (FHWA) uses the Annual Reports to report to Congress.

SCAG, the CMAs and Caltrans work together in improving the reporting accuracy and timely monitoring of highway data collection and analysis.

Caltrans, in conjunction with the California Highway Patrol (CHP), has created Transportation Management Centers (TMCs) to rapidly detect and respond to incidents while managing the resulting congestion. The TMC provides coordinated transportation management for normal commutes, special events and traffic incidents with the help of electronic technologies such as electronic sensors in the pavement, freeway call boxes, video cameras, 911 calls, patrol officers, Caltrans highway crews, ramp meter sensors, earthquake monitors, motorist initiated calls, and commercial traffic reports.

The TMCs are operated within each Caltrans district. For the SCAG region, Caltrans Districts 7 (Los Angeles and Ventura Counties), 8 (Riverside and San Bernardino Counties), 11 (includes Imperial County), and 12 (Orange County) all have TMCs.

PRESERVE THE EXISTING INFRASTRUCTURE

A key aspect of Transportation System Management is protecting the current transportation infrastructure. The Region has invested billions of dollars in developing its multi-modal transportation system and must protect these investments for current and future generations. SCAG's 2008 RTP identifies significant funding for infrastructure preservation.

OPERATIONAL STRATEGIES

The combination of small physical improvements and Intelligent Transportation System (ITS) deployments offer affordable solutions to restore some efficiency. SCAG is working with Caltrans to develop corridor management plans (TMCs). TMCs using advanced integrated ITS technologies in all four Caltrans Districts serving the SCAG region will be used to serve the entire region. New TMCs are under construction and will replace temporary facilities in Districts 7 and 8.

Through a variety of public and private information service providers, most of the current real time traffic detection freeway and HOV system speeds, California Highway Patrol incident data, electronic message signs and transit information are available to travelers on the internet, pagers, and other portable communications/data devices.

Research completed for SCAG in 2002 by the Volpe National Laboratory indicates a high propensity of traveler information users to shift departure time, reduce or eliminate trips, and shift modes in response to real time congestion information.

Currently, over 800 centerline miles of the freeway system in the urbanized portion of the SCAG region have full traffic detection capabilities, and coverage with over 300 video cameras. Additional detection devices are being added on portions of Interstate 15, Route 71, Route 110 and SR-210. Additionally, the local arterial ITS infrastructure is supported by over 15,000 detection devices, and hundreds of video cameras; providing optimized signal synchronization and traffic flow responses to incidents and degraded conditions throughout the day. Local arterials are also being equipped with a growing number of the electronic message signs at critical locations such as major arterial and special event centers to provide real time information to motorists in order to improve traffic management.

ITS projects were originally designed to increase transportation efficiency, but are also being used for safety, security and emergency response. Because the successful operation of ITS projects usually depends upon coordination and

communication between different agencies and the systems they operate, it is essential that there be a region-wide "framework for cooperation" that is also cost-effective. This framework is known as the Southern California Regional ITS Architecture. SCAG has taken a leadership role in developing the Southern California Regional ITS Architecture for the region.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM is the all-inclusive term given to a variety of measures used to improve the efficiency of the existing transportation system by managing travel demand; including carpooling, transit, heavy and high-speed-rail, telecommuting and non-motorized transportation. In the 2008 RTP, SCAG funded $1.2 billion in TDM investments.

LINKING LAND USE AND TRANSPORTATION PLANNING

By linking land use with transportation planning we may maximize the available capacity of our transportation infrastructure. The Compass Blueprint 2% Strategy is a guideline that illustrates how and where we can implement the Growth Vision for Southern California's future. The 2% Strategy Opportunity Areas calls for modest changes to current land use and transportation trends on only two percent of the region's land area.

The 2% Strategy encourages transportation investments and land use decisions that are mutually supportive; by locating new housing near existing jobs and new jobs near existing housing thus encouraging transit-oriented development, promotes a variety of travel choices, creates significant areas of mixed-use development and walkable communities, and preserves existing open space and stable residential areas.

Compass Blueprint is now in the implementation phase and SCAG is partnering with cities and counties in Southern California to realize this growth vision on-the-ground. Investing our planning efforts and resources according to the 2% Strategy will yield the greatest progress toward improving mobility, livability, prosperity and sustainability for local neighborhoods and their residents.

STRATEGIC SYSTEM EXPANSION

Strategic System Expansions enhance existing capacity by relieving bottlenecks, improve connectivity and develop regionally significant corridors. The 2008 RTP contains approximately $90.7 billion in highway and arterial improvement projects in addition to already funded or programmed projects. Major categories of the proposed improvements include High Occupancy Vehicles (HOV) gap closures, HOV connectors, mixed-flow improvements, toll lanes and High Occupancy Toll lanes as well as strategic arterial improvements. As expansion is the most expensive option, this is only used when other strategies are not feasible or are found to be ineffectual.

Within the context of strategic system expansion, the Regionally Significant Transportation Investment Study (RSTIS) process provides a multi-modal transportation alternative analysis. RSTIS is one of SCAG's established processes and has been adopted as part of the RTP process. In the federally designated non-attainment and maintenance areas, RSTIS is required to ensure alternatives, other than single occupancy vehicles (SOV), are taken into consideration in the improvement of mobility and air quality.

TRANSPORTATION FINANCE

Because of the limited funding available, SCAG is pursuing various strategies to fund transportation projects. These include High Occupancy Toll Lanes, and public-private partnerships. In recognizing that there are limited public resources that are available to address many large-scale transportation projects in the Region, this strategy simply dictates that the Region will consider the feasibility of using innovative public-private partnership arrangements to develop transportation infrastructure where such financing strategies are applicable. These financing arrangements are most applicable where projects are capable of generating their own streams of revenues to offset capital de-

velopment, operations and maintenance as well as any associated debt service costs.

CONGESTION MANAGEMENT PROGRAM (CMP)

There are five CMAs in the SCAG region and each develops a CMP for their respective county. The degree of urbanization varies from one county to another so the magnitude of congestion will also vary. The CMPs' efforts have been brought together on a region-wide basis and integrated into the SCAG regional planning process.

SCAG's Regional Council and the Regional Transportation Agencies Coalition ensure consistency between the county CMPs and SCAG's RTP and RTIP, through project implementation.

In 1995, SCAG and CMAs developed the following criteria to ensure consistency and compatibility between the regional transportation planning process and the county congestion management process:

- CMP consistency with the current RTP
- Interregional (inter-county) coordination between the CMPs goals and objectives
- Consistency between county-wide model / database and SCAG's model/ database
- All regionally significant CMP projects are to be modeled and incorporated into SCAG's Regional Transportation Modeling System (network)

The sum of these criteria is that each county CMP will be responsive to the goals and objectives of SCAG's RTP. Compliance with the above criteria is essential, particularly for those CMP projects to be programmed into the SCAG RTIP

TABLE 1 CONGESTION MANAGEMENT PROGRAMS IN THE SCAG REGION

County	Congestion Management Agency (CMA)	Congestion Management Plan
Los Angeles	Los Angeles County Metropolitan Transportation Authority (LACMTA)	2004 Congestion Management Plan for Los Angeles County (Updated Statement of Conformity issued in 2007)
Orange	Orange County Transportation Authority (OCTA)	2007 Orange County Congestion Management Plan (November 2007)
Riverside	Riverside County Transportation Commission (RCTC)	2006 Riverside County Congestion Management Plan
San Bernardino	San Bernardino Associated Governments (SANBAG)	2005 Congestion Management Plan for San Bernardino County
Ventura	Ventura County Transportation Commission (VCTC)	2005 Ventura County Congestion Management Plan

All county CMPs share the same goal of reducing congestion and applying congestion relief strategies. However, there are different priorities in the selection of related strategies based on the needs of each county.. Therefore, each county CMP differs in form and local procedure. By State statute, all CMPs perform the same functions outlined below and are consistent with the federal CMS requirements.

- Highway Performance - each CMA monitors the performance of an identified highway system. This allows each county to track how their systems, and their individual components, are performing in comparison to established standards, and how performance changes take place over time.
- Multi-Modal Performance - in addition to highway performance, each CMP contains an element to evaluate the performance of other transportation modes including transit.

- Transportation Demand Management (TDM) - each CMP contains a TDM component geared at reducing travel demand and promoting alternative transportation methods.
- Land Use Programs and Analysis - each CMP incorporates a program to analyze the impacts of local land use decisions on the regional transportation system.
- Capital Improvement Program (CIP) - using data and performance measures developed through the activities identified above, each CMP develops a CIP. This becomes the first step in developing the County TIP. Under State law, projects funded through the Regional Transportation Improvement Program (RTIP) must first be contained in the CMP.
- Deficiency Plan – despite the above stated efforts, when unacceptable levels of congestion occur, the respective CMP contains a set of "deficiency plan" provisions to address the problems. Deficiency plans may be developed for specific problem areas or on a county-wide-system basis. Projects implemented through the deficiency plan must, by statute, include both mobility and air quality benefits. In many cases, the deficiency plan captures the benefits of the transportation projects beyond the SCAG RTIP such as non-federally funded / non-regionally significant projects.

Information on the CMP activities, and resulting data, is updated on a biennial basis by each CMA and supplied to SCAG and the respective air quality management district.

IREGIONAL TRANSPORTATION IMPROVEMENT PROGRAM (RTIP)

All federally funded congestion relief strategies (projects and programs) are programmed into the Regional Transportation Improvement Program (RTIP) in the SCAG region. Under state law, the CMP projects must be incorporated into the RTIP in order to receive federal and state funds. Under federal law, the RTIP must be updated every two years for funding.

In non-attainment and maintenance areas, the RTIP projects as a whole, including congestion relief projects, must be analyzed for the Transportation Conformity requirements. In project-level analysis, the projects requiring federal action (funding or approval) are subject to environmental impact study (EIS) through the National Environmental Policy Act (NEPA). This is an evaluation and analysis of the alternatives. The selected alternative will be incorporated into the RTIP for implementation.

Note that the CMP documents list additional projects which are 100% locally funded and not regionally significant, such as the transportation demand management (TDM) and bike lane projects, as these also cumulatively, help mitigate congestion.